

**ENGINEERING AND LAND SURVEYING EXAMINING
BOARD[193C]**

Notice of Intended Action

Proposing rule making related to examination and experience requirements and providing an opportunity for public comment

The Engineering and Land Surveying Examining Board hereby proposes to amend Chapter 1, “Administration,” Chapter 2, “Fees and Charges,” Chapter 3, “Application and Renewal Process,” Chapter 4, “Engineering Licensure,” and Chapter 7, “Professional Development,” Iowa Administrative Code.

Legal Authority for Rule Making

This rule making is proposed under the authority provided in Iowa Code section 542B.6.

State or Federal Law Implemented

This rule making implements, in whole or in part, Iowa Code chapter 542B; 2020 Iowa Acts, House File 2389; and 2021 Iowa Acts, House File 284.

Purpose and Summary

2021 Iowa Acts, House File 284, allows the Board to adopt rules for “decoupling.” Decoupling allows professional engineer applicants to sit for the Principles and Practice of Engineering (PE) examination any time after passing the Fundamentals of Engineering (FE) examination, instead of first acquiring four years of professional engineering experience, as is the current situation. The experience requirement will be verified at the time the applicant applies for a PE license. 2020 Iowa Acts, House File 2389, requires the Board to amend rules regarding waivers and variances. The proposed amendments in this rule making are in response to these legislative changes. There are also some updates to rules included in these proposed amendments.

Fiscal Impact

This rule making removes the chronological component of requirements for a PE license. There is a fiscal impact of less than \$100,000 annually or \$500,000 over five years.

Jobs Impact

After analysis and review of this rule making, no impact on jobs has been found.

Waivers

Any person who believes that the application of the discretionary provisions of this rule making would result in hardship or injustice to that person may petition the Board for a waiver of the discretionary provisions, if any, pursuant to 193—Chapter 5.

Public Comment

Any interested person may submit written comments concerning this proposed rule making. Written comments in response to this rule making must be received by the Board no later than 4:30 p.m. on August 31, 2021. Comments should be directed to:

Robert Lampe
Iowa Engineering and Land Surveying Examining Board
200 East Grand Avenue, Suite 350
Des Moines, Iowa 50309
Email: robert.lampe@iowa.gov

Public Hearing

A public hearing at which persons may present their views orally or in writing will be held as follows:

August 31, 2021
9 to 10 a.m.

Professional Licensing Bureau Offices
200 East Grand Avenue, Suite 350
Des Moines, Iowa

Persons who wish to make oral comments at the public hearing may be asked to state their names for the record and to confine their remarks to the subject of this proposed rule making.

Any persons who intend to attend the public hearing and have special requirements, such as those related to hearing or mobility impairments, should contact the Board and advise of specific needs.

Review by Administrative Rules Review Committee

The Administrative Rules Review Committee, a bipartisan legislative committee which oversees rule making by executive branch agencies, may, on its own motion or on written request by any individual or group, review this rule making at its [regular monthly meeting](#) or at a special meeting. The Committee's meetings are open to the public, and interested persons may be heard as provided in Iowa Code section 17A.8(6).

The following rule-making actions are proposed:

ITEM 1. Rescind subrule **1.1(3)**.

ITEM 2. Amend rule 193C—1.4(542B) as follows:

193C—1.4(542B) Waivers and variances.

1.4(1) The board's rules regarding waivers ~~and variances~~ can be found in the uniform rules for the division of professional licensing and regulation at 193—Chapter 5.

1.4(2) Interim rulings. The board chairperson, or vice chairperson if the chairperson is not available, may rule on a petition for waiver ~~or variance~~ when it would not be timely to wait for the next regularly scheduled board meeting for a ruling from the board.

a. to c. No change.

d. This subrule on interim rulings does not apply if the waiver ~~or variance~~ was filed in a contested case.

ITEM 3. Amend rule 193C—2.1(542B) as follows:

193C—2.1(542B) General statement. Fees are fixed in such an amount as will defray the expense of administering board responsibilities. Fees are charged in accordance with the following table:

| Type of fee | Amount |
|--|--|
| Renewal | |
| Active license renewal | \$100 |
| Inactive license renewal | \$40 |
| Reinstatement of lapsed license (In addition to the reinstatement fee, the applicant for reinstatement must also pay the appropriate prorated reinstated license fee below.) | \$100 |
| Reinstatement of inactive to active license | \$60 |
| New or reinstated license (In addition to the appropriate prorated reinstated license fee, the applicant for reinstatement must also pay the reinstatement fee above.) | \$100 Prorated at six-month intervals |
| Application for examinations examination | |
| Principles and Practice of Engineering | \$100 |
| Principles and Practice of Land Surveying | \$100 |
| Examinations | |
| Fees for NCEES examinations are paid directly to the examination service at the rate established by contract based upon cost of the examination materials and processing expenses. | Variable |
| Iowa State Specific Land Surveying Examination | \$30 |
| Application for licensure by comity as a professional engineer or professional land surveyor | \$150 |
| Certificates | |
| Initial professional engineer or professional land surveyor certificate | \$15 |
| Additional or duplicate certificate | \$25 |
| Engineer or land surveyor intern certificate | No charge |
| Check returned for insufficient funds | \$15 |
| Verification of records for lapsed licensees | \$15 per verification |
| Late renewal fee (for renewals postmarked completed after December 31 and before February 1 January 31) | \$25 |

ITEM 4. Amend rule 193C—3.1(542B) as follows:

193C—3.1(542B) General statement. A person requesting to be licensed as a professional engineer or professional land surveyor shall submit a completed, standardized, ~~notarized~~ application form, which may be obtained ~~from the board's office~~ or electronically from the board's Internet web page.

3.1(1) and 3.1(2) No change.

3.1(3) Academic transcripts.

a. United States institutions. Completion of post-high school education shall be evidenced by the board's receipt of an applicant's transcripts directly from the office of the registrar of each institution ~~attended~~ conferring a qualifying degree.

b. No change.

ITEM 5. Amend rule 193C—3.2(542B) as follows:

193C—3.2(542B) Examination application Application components and due dates.

3.2(1) Fundamentals of Engineering examination ~~application components and due dates~~. Applications for the Fundamentals of Engineering examination are submitted directly to the examination service selected by the board to administer the examinations.

3.2(2) No change.

3.2(3) *Principles and Practice of Engineering examination application components and due dates.* Principles and Practice of Engineering and Principles and Practice of Land Surveying examination applications require a detailed review and must, therefore, be submitted to the board office. To facilitate the transition to computer-based testing offered throughout the year, application files with all required components submitted to the board office by the first day of each month will be reviewed at the next regularly scheduled board meeting. The Principles and Practice examination application packet includes the following components: (1) the completed online application form, (2) the required number of references, (3) the project statement, and (4) the ethics questionnaire. In addition, a complete application file must include verification of examination records and transcripts. Examination applications will not be reviewed by the board until the application file is complete. Since the verification of examination records must be sent directly from the jurisdiction where the applicant took the Fundamentals of Engineering examination, the applicant should contact the other jurisdiction well in advance of the deadline for submittal of the application to request this verification. For transcripts, the applicant should contact the university well in advance to ensure that the transcripts are received by the deadline are submitted directly to the examination service selected by the board. Documentation of a qualifying degree will be required prior to approval to sit for the examination.

3.2(4) *Principles and Practice of Land Surveying application components and due dates.* Principles and Practice of Land Surveying examination applications are submitted to the board office. Application files with all required components submitted to the board office by the first day of each month will be reviewed at the next regularly scheduled board meeting. The examination application file includes the following components: (a) the completed online application form, (b) the required number of references, (c) the project statement, and (d) the ethics questionnaire. In addition, a complete application file must include verification of examination records and transcripts. Examination applications will not be reviewed by the board until the application file is complete. Since the verification of examination records must be sent directly from the jurisdiction where the applicant took the Fundamentals of Land Surveying examination, the applicant should contact the other jurisdiction well in advance of the deadline for submittal of the application to request this verification. For transcripts, the applicant should contact the university well in advance to ensure that the transcripts are received by the deadline.

3.2(5) *Professional engineer license application.* Professional engineer license applications are submitted to the board office. Application files with all required components submitted to the board office by the first day of each month will be reviewed at the next regularly scheduled board meeting. The professional engineer license application includes the following components: (a) the completed online application form, (b) the required number of references, (c) the project statement, and (d) the ethics questionnaire. In addition, a complete application file must include verification of examination records and transcripts. Professional engineer license applications will not be reviewed until the application file is complete. Since the verification of examination records must be sent directly from the jurisdiction where the applicant took the Fundamentals of Engineering examination, the applicant should contact the other jurisdiction well in advance of the deadline for submittal of the application to request this verification. For transcripts, the applicant should contact the university well in advance to ensure that the transcripts are received by the deadline.

ITEM 6. Amend subrule 3.3(1) as follows:

3.3(1) The components of a comity application include: the completed, ~~notarized~~ application form; the ethics questionnaire; references; transcripts; and verification of examinations, as appropriate. Comity applicants may submit the NCEES record in lieu of providing references, verifications, transcripts, and employment history. Since the verification of examination records must, in most cases, be sent directly from the jurisdiction where the applicant took the Fundamentals of Engineering and Principles and Practice Engineering examinations, the applicant should contact the other jurisdiction in advance of submitting the application to request this verification and make every effort to have the verification sent to the board at the time that the application is submitted. Likewise, for transcripts the applicant should

contact the university in advance of submitting the application to make every effort to have the transcripts transmitted to the board at the time that the application is submitted.

ITEM 7. Amend subrule 3.4(4) as follows:

3.4(4) Notification of expiration. The board shall notify licensees whose certificates of licensure have expired. ~~This notification may be provided through publication in the division's newsletter.~~ The failure of the board to provide this courtesy notification, or the failure of the licensee to receive the courtesy notification, shall not extend the date of expiration.

ITEM 8. Amend paragraph **3.4(6)“a”** as follows:

a. Received by the board ~~in paper or electronic form, or postmarked with a nonmetered United States Postal Service postmark on or before the expiration date of the certificate~~ through the online renewal process;

ITEM 9. Amend subrule 3.5(2) as follows:

3.5(2) To reinstate a license that has lapsed for less than one year, the applicant for reinstatement must pay the fee required by 193C—2.1(542B) and must satisfy one of the following requirements:

a. Provide documentation of 30 professional development hours achieved within the current and previous biennium (dual licensees must provide documentation of 20 professional development hours for each profession). Professional development hours used for reinstatement shall not be reused at the next renewal; or

b. and c. No change.

ITEM 10. Amend subrule 3.5(4) as follows:

3.5(4) To reinstate from inactive status to active status, the applicant for reinstatement must pay the fee required by 193C—2.1(542B) and must provide documentation of 45 professional development hours achieved within the current and previous biennium (dual licensees must provide documentation of 30 professional development hours for each profession). Professional development hours used for a reinstatement shall not be reused at the next renewal.

ITEM 11. Amend rule 193C—4.1(542B), introductory paragraph, as follows:

193C—4.1(542B) Requirements for licensure by examination. The specific requirements for initial licensing in Iowa are established in Iowa Code section 542B.14, and it is the board's intention to issue initial licensure only when those requirements are satisfied ~~chronologically~~ as set forth in the statute.

ITEM 12. Amend subrules 4.1(1) and 4.1(2) as follows:

4.1(1) First, the applicant for initial licensure in Iowa must satisfy the educational requirements as follows:

a. Graduation from an engineering program of four years or more.

(1) If an applicant did not graduate from an Accreditation Board of Engineering and Technology/Engineering Accreditation Commission (ABET/EAC)- or Canadian Engineering Accreditation Board (CEAB)-accredited curriculum, the applicant must also complete, in addition to the engineering degree, one extra year of practical experience satisfactory to the board after receiving the engineering degree. The experience must be verified by a professional engineer (PE) supervisory reference.

(2) No change.

b. No change.

c. The educational requirement may be fulfilled by a master's degree in engineering from an institution in the United States of America which offers an accredited bachelor's degree in the same curriculum. The master's degree candidate must be required to fulfill the requirements for the bachelor's degree in the same area of specialization. An applicant with a master's degree in engineering from an institution in the United States of America that does not offer an accredited bachelor's degree in the same curriculum will be required to have an additional year of qualifying experience obtained after receipt of the qualifying degree. Applicants using a master's degree as the qualifying degree may not also use the master's degree for qualifying experience credit.

d. The educational requirement may be fulfilled by a doctor of philosophy degree in engineering from an institution in the United States of America which offers an accredited bachelor's degree in the same curriculum. The doctoral candidate must be required to fulfill the requirements for the bachelor's degree in the same area of specialization. An applicant with a doctor of philosophy degree in engineering from an institution in the United States of America that does not offer an accredited bachelor's degree in the same curriculum will be required to have an additional year of qualifying experience obtained after receipt of the qualifying degree. Applicants using a doctor of philosophy degree as the qualifying degree may not also use the doctor of philosophy degree for qualifying experience credit or as an exemption for the Fundamentals of Engineering examination (FE exam).

~~4.1(2) Second, the applicant must successfully complete the Fundamentals of Engineering examination (FE exam).~~

a. and b. No change.

c. An applicant who graduated from a satisfactory engineering program and has ~~10~~ ten years or more of work experience satisfactory to the board shall not be required to take the FE exam. This experience is in addition to the four or five years of experience required for the PE license.

d. No change.

e. All FE exam candidates will apply directly to the National Council of Examiners for Engineering and Surveying (NCEES) and will self-attest as to the candidate's eligibility to sit for the FE exam. The board will verify acceptable education and experience at the time an applicant applies to sit for the Principles and Practice of Engineering examination or applies for an Engineer Intern (EI) for an Engineer in Training (EIT) number. The board shall apply the education and experience standards set forth in this rule but will allow reasonable flexibility in timing in the event an applicant sat for and passed the FE exam at a point earlier than provided in this rule. The board will not, however, issue an ~~EI~~ EIT number unless all experience required for candidates who hold engineering degrees from nonaccredited programs has been satisfied at the time of the ~~EI~~ EIT application.

ITEM 13. Rescind subrule 4.1(3) and adopt the following **new** subrule in lieu thereof:

4.1(3) Third, the applicant must successfully complete the Principles and Practice of Engineering examination (PE exam).

a. An applicant may take the PE exam any time after passing the FE exam.

b. All PE exam candidates will apply directly to the NCEES. The applicant will be required to document a qualifying education. The board will verify acceptable experience at the time the applicant applies for a professional engineer license.

ITEM 14. Rescind subrule 4.1(4) and adopt the following **new** subrule in lieu thereof:

4.1(4) Fourth, the applicant must satisfy the qualifying experience requirements. The purpose of this provision is to ensure that the applicant has acquired the professional judgment, capacity, and competence to design engineering works, structures, and systems. The following criteria will be considered by the board in determining whether an applicant's experience satisfies the statutory requirements.

a. Oversight. All applicants must have direct supervision or professional tutelage (instruction, guidance, mentoring, review, and critique) from one or more licensed professional engineers. This experience must be verified by one or more licensed professional engineers who are familiar with the applicant's work and can attest that the experience was of the required quality and was accurately described. Verification of the qualifying experience is provided through the reference forms. It is the responsibility of the applicant to provide reference forms to the licensed professional engineers to complete and return directly to the board.

(1) To be readily acceptable, all of the qualifying experience shall be under the direct supervision and tutelage of one or more licensed professional engineers.

(2) To be considered, a portion of the qualifying experience shall be under the direct supervision or tutelage of one or more licensed professional engineers. In this case, the rest of the qualifying experience shall be under the direct supervision or tutelage of an unlicensed graduate engineer.

b. Documentation of experience. All applicants must submit references and a work project description. The board reserves the right to contact the employer and the person providing tutelage on the project for information about the project experience acquired by the applicant.

(1) References. An applicant for the professional engineer license shall submit three references from professional engineers or a combination of professional engineers and graduate engineers on forms provided by the board.

1. At least one of the licensed professional engineers who provide a reference for the applicant shall have provided direct supervision or professional tutelage in the course of a mentoring relationship on such matters as technical skills; professional development; the exercise of professional judgment, ethics, and standards in the application of engineering principles and in the review of such matters by others; and the professional obligations of assuming responsible charge of professional engineering works and services.

2. If the applicant has had more than one supervisor, at least two of the references shall be from a supervisor of the applicant. An applicant shall submit supervisor references to verify at least four years of qualifying experience.

3. If an applicant has had professional experience under more than one employer, the applicant shall provide references from individuals with knowledge of the work performed under a minimum of two employers.

4. The board reserves the right to contact references, supervisors, or employers for information about the applicant's professional experience and competence or to request additional references.

5. The board uses references partially as a means of verifying an applicant's record of experience. The applicant must distribute a reference form to individuals who are asked to submit references for the applicant. To each reference form, the applicant shall attach a narrative of the applicant's experience record that is being addressed by the referring individual.

6. The board may require the applicant to submit other evidence of suitable tutelage and supervision.

7. The board may require an oral interview with the applicant or other evidence to verify the applicant's knowledge and experience in the principles and practice of engineering.

8. The board may conduct interviews with persons providing tutelage or supervision to the applicant.

(2) Work project description. An applicant for initial licensure as a professional engineer must include with the application a work project statement describing a significant project on which the applicant worked during the previous 12 months. The board will review all work project statements and will approve only those that include all of the components listed below in numbered paragraphs 4.1(4) "b"(2) "1" to "4" and meet the criteria listed in numbered paragraph 4.1(4) "b"(2) "5."

1. The statement shall describe the applicant's degree of responsibility for the project.

2. The statement shall identify the project's owner and location.

3. The statement shall include the name of the supervisor in charge of the project and, if the supervisor is a professional engineer, the license number of the supervisor.

4. The statement shall be signed and dated by the applicant.

5. Criteria the board shall use in evaluating the acceptability of the project as qualifying experience for the applicant shall include, but not be limited to, the following:

- The degree to which the project and the experience described have progressed from assignments typical of initial assignments to those more nearly expected of a licensed professional;

- The scope and quality of the professional tutelage experienced by the applicant;

- The technical decisions required of the applicant in the project; and

- The professional decisions required of the applicant.

c. Quality. Qualifying experience shall be of such quality as to demonstrate that the applicant has developed technical skill and initiative in the correct application of engineering principles. Such experience should demonstrate the applicant's capacity to review the application of these principles by others and to assume responsibility for engineering work of professional character.

d. Scope. Experience shall be of sufficient breadth and scope to ensure that the applicant has attained reasonably well-rounded professional competence in a basic engineering field, rather than highly specialized skill in a narrow and limited field.

e. Progression. The record of experience shall indicate successive and continued progress from initial, subprofessional work of simpler character to recent, professional work of greater complexity and a higher degree of responsibility, as well as continued interest and effort on the part of the applicant toward further professional development and advancement. In evaluating this progression, the board will consider both subprofessional and professional activity as reported by the applicant. However, only work experience obtained after the applicant's receipt of the qualifying degree will be considered, except as described in paragraph 4.1(4) "f." Subprofessional work includes the time spent as an engineering technician, engineering assistant, inspector, or similar under the direct supervision of a licensed professional engineer. Professional work includes the time during which the applicant was occupied in engineering work of higher grade and responsibility than that defined above as subprofessional work. Time spent in teaching engineering subjects in a college or university at the level of assistant professor or higher may be listed as professional work.

f. Special work experience. Work experience prior to graduation from college may be accepted toward satisfaction of qualifying experience requirements only as follows: Cooperative work programs and internships administered by engineering colleges and verified on the transcript, with a verifying reference from the internship supervisor will be considered as half-time credit, with a maximum allowance of 6 months (12 months of cooperative work experience or internship) applicable toward the satisfaction of qualifying experience requirements. An applicant's advanced education, military experience, or both will be reviewed in order to determine if they are applicable toward the statutory requirements for experience.

g. Advanced education. An applicant who has earned a master of science degree that includes research experience, in addition to writing an associated thesis, from an institution in the United States of America with an accredited bachelor of science engineering degree program in the same discipline and who has fulfilled the requirements for a bachelor of science degree may be granted a maximum of one year's experience credit. An applicant who has earned a doctor of philosophy degree from an institution in the United States of America with an accredited bachelor of science engineering degree program in the same discipline may be granted a maximum of two years of experience credit in addition to the one-half year's credit for the master of science degree. An applicant using an advanced degree as experience credit shall not be allowed to also use the advanced degree as the qualifying degree to become licensed.

h. Teaching experience. Teaching of engineering subjects at the level of assistant professor or higher in an accredited engineering program may be considered as experience, provided the applicant's immediate supervisor is a licensed professional engineer in the jurisdiction in which the college or university is located. If the applicant's immediate supervisor is not a licensed professional engineer, a program of mentoring or peer review by a licensed professional engineer acceptable to the board must be demonstrated. Applicants using teaching or research as experience must have a minimum of four years of acceptable experience in research, industry, or consulting. The board shall consider the complexity of the project(s) presented, the degree of responsibility of the applicant within the project, and other factors the board deems relevant. Academic experience must demonstrate increasing levels of responsibility for the conduct and management of projects involving engineering research, development, or application. The board reserves the right to contact employers for information about the applicant's professional experience and competence.

i. Joint applications. Applicants requesting licensure both as a professional engineer and a land surveyor must submit a history of professional experience in both fields. Such histories will be considered separately on a case-by-case basis. The board does not grant full credit for concurrent experience in both professions.

j. Corporate exemption. The purpose of the provisions on qualifying experience which authorize the board to consider some experience that was not acquired under the direct supervision and tutelage of a licensed professional engineer is to provide a path toward licensure for those applicants who gain experience in settings where licensure is not required under the corporate exemption set forth in Iowa

Code section 542B.26 or under similar statutory provisions in other jurisdictions. Such applicants may lawfully gain professional engineering experience under the supervision or tutelage of graduate engineers who are not licensed. To aid such applicants, the following guidelines are provided:

(1) The board shall not consider any experience gained under circumstances where the applicant could not lawfully have practiced professional engineering.

(2) The board shall not consider any experience the applicant may have attained in compliance with the law but that was not under the supervision or tutelage of a graduate engineer. The fundamental purpose of qualifying experience is professionally guided training to expand and complement engineering education. Self-guided experience does not qualify.

(3) Persons who desire licensure as professional engineers who are not directly supervised by licensed professional engineers should form tutelage relationships with licensed professional engineers as early in the process of gaining experience as is feasible. Unlicensed graduate engineers are not authorized to offer professional engineering services to the public or to be in responsible charge of such services; nor are they subject to the examinations required for licensure, the professional and ethical standards applicable to licensees, or the regulatory oversight of a licensing authority. Qualifying experience is intended to address both technical competence and the obligations to the public of a licensed professional engineer.

(4) Because the circumstances of individual applicants in corporate exemption settings are diverse, it is not possible to identify the minimum period of time during which the applicant must receive supervision or tutelage from one or more licensed professional engineers to be eligible for licensure. The board shall take into consideration both the quantity and quality of such experience. In general, an applicant's exposure to supervision or tutelage by one or more licensed professional engineers should reflect a sustained period of in-depth interaction from which the licensed engineers are in a position to form credible opinions on the applicant's qualifications to be in responsible charge of engineering services offered to the public as a licensed professional engineer.

(5) The burden is on the applicant to demonstrate to the board's satisfaction that the combination of unlicensed and licensed supervision and tutelage satisfies the requirements of qualifying experience described in this rule.

k. Practical experience. An applicant for a professional engineer license shall have a minimum of one year of practical experience in the United States of America or a territory under its jurisdiction.

ITEM 15. Rescind subrule 4.1(5) and adopt the following **new** subrule in lieu thereof:

4.1(5) Education and experience requirements. The board will require the minimum number of years set forth on the following chart before an applicant will be eligible for licensure.

| Experience Requirements | |
|---|------------------------------|
| If the education is: | Required years of experience |
| A 4-year bachelor's degree in a nonaccredited engineering program | 5 |
| A 4-year bachelor's degree in an accredited engineering program OR a qualifying master's degree pursuant to paragraph 4.1(1) "c" OR a qualifying PhD pursuant to paragraph 4.1(1) "d" | 4 |
| A 4-year bachelor's degree in an accredited engineering program plus a qualifying master's degree pursuant to paragraph 4.1(4) "g" | 3 |
| A 4-year bachelor's degree in an accredited engineering program plus a qualifying PhD pursuant to paragraph 4.1(4) "g" | 2 |
| A 4-year bachelor's degree in an accredited engineering program AND a qualifying master's degree AND a qualifying PhD pursuant to paragraph 4.1(4) "g" | 1 |

ITEM 16. Amend subrule 7.5(6) as follows:

7.5(6) A new licensee shall satisfy one-half the biennial continuing education requirement at the first renewal following initial licensure. A comity license is not an initial license. Professional engineers and professional land surveyors licensed by comity are not eligible for the one-half continuing education requirement.